

ABSTRACT OF THE DISCLOSURE

A vehicle occupant position sensor is mounted on the front of an airbag which is deployed toward a vehicle occupant. The sensor comprises a capacitance sensor constructed by rendering portions of the airbag which face the vehicle occupant conductive. The airbag on which the sensor is placed is also constructed to allow venting of the airbag before it is fully deployed. The distance between the sensor and the vehicle occupant is continually determined with respect to the sensor. The output of the capacitive sensor is processed by a control system and is used to predict the interaction between the airbag and the vehicle passenger and to cause the airbag to be vented if that interaction is predicted to be more harmful than beneficial to the vehicle occupant. A system which prevents airbag venting once the airbag is inflated or nearly inflated can also be employed.